

Amendments to the Specification:

Please amend the paragraph beginning at page 6, line 16 as follows:

In yet a further embodiment of the present invention, a dialysis fluid heater for heating fluid in a fluid container is provided. The heater includes a radiant energy heater. The radiant energy heater has a radiant energy generator and a first fluid container interface. The radiant energy generator has a radiant energy emission in a direction toward the first fluid container interface. A second heater having a heat generator and a second fluid container interface is provided. The heat generator has a heat transfer emission towards the second fluid container interface. The dialysis fluid is heated by the radiant energy generator and the heat generator when the dialysis fluid is moving through the container.

Please amend the paragraph beginning at page 13, line 1 as follows:

The infrared heater 12 uses radiant energy to heat a depth of fluid volume in a 3-dimensional manner. That is, the dialysate absorbs the radiant energy at varying depths. Dialysis fluid contains a large amount of water, and the infrared wave spectrum (from about 1.0 ~~mierons~~ micron wavelength to beyond 5.0 microns wavelength) is highly absorbed by water. The infrared heater 12 also heats the internal surfaces of the disposable cassette 16, which further heats the fluid. The 3-dimensional heating of the fluid volume by the infrared heater 12 or other radiant energy emitter is a more effective and efficient heater compared with 2-dimensional plate-type heaters. Accordingly, the infrared heater 12 provides an effective heater for dialysate.

Please amend the paragraph beginning at page 19, line 8 as follows:

Heat loss can also occur during the continuous running of the dialysis system. Here, a constant but lesser demand is needed to "top-off" the system. For example, the fluid in the patient-fluid loop 58 may be exposed to ambient temperatures lower than the body temperature of the patient 56. Heat loss from the dialysate in the patient-fluid loop 58 occurs through uninsulated lines, valves and pumps. Similarly, the fluid in the regeneration fluid loop 66 of the ~~dialyzer 66~~ dialyzer 62 may ~~lose~~ remove heat to the surrounding ambient environment. To correct the ambient heat loss, the fluid heater 10 heats the dialysis fluid in the patient-fluid loop 58 to desired temperatures, e.g., the human body temperature of approximately 37°C.

Please amend the paragraph beginning at page 19, line 24 as follows:

The controller controls either one or both of the infrared heater 12 and the plate heater 14 to heat the fluid to any desired temperature. The controller (not illustrated) may turn on only the infrared ~~heater 14~~ heater 12 if desired, or the controller may alternatively or additionally turn on the plate heater 14. The

controller may only need to run the plate heater 14, e.g., to ~~top-off~~ top-off the system when it is running continuously. The controller can, of course, be programmed to use many different algorithms to run the component heaters 12 and 14 of the heater 10.